CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.05/KRIDL/WMM/Gradation/2014-15

25.06.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements to Roads and Drains from centre excise Layout to Railway Level crossing (telecom Layout railway crossing) in Ward No.05, Chokkanahalli Village limits, BBMP, Bangalore.

Reference : AEE/BTP/360/2014-15 Dated: 23.06.2014

Date of Testing : 25.06.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **25615**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	990	990	3.9	96.1	95-100
22.4	5450	6440	25.1	74.9	60-80
11.2	5845	12285	48.0	52.0	40-60
4.75	4460	16745	65.4	34.6	25-40
2.36	3860	20605	80.4	19.6	15-30
0.600	2215	22820	89.1	10.9	8-22
0.075	2450	25270	98.7	1.3	0-8

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples received in the laboratory.
3. Any Query regarding the report must be reported within 15 days from the date of testing.

Civil-Tech Consultants & Engineers Bangalore

Assistant Executive Engineer
Byatarayanapura Sub Division
B.R.M.P. Bangalore

M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

AE-05

CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.05/KRIDL/SDBC/Bitumen/2014-15 12.07.2014

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS2386 and IRC:SP:11-1984

CLIENT	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
AGENCY	**Technical Manager,** KRIDL, Bangalore.
NAME OF THE WORK	Improvements to Roads and Drains from centre excise Layout to Railway Level crossing (telecom Layout railway crossing) in Ward No.05, Chokkanahalli Village limits, BBMP, Bangalore.
REFERENCE	AEE/BTP/360/2014-15 Dated: 23.06.2014
SAMPLE I/D	Roads and Drains at from centre excise Layout in Ward No.05.
DATE OF TESTING	12.07.2014

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	475	475
3. Weight of Asphalt and Mineral matter Extracted,	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	25	25.00
7. Bitumen content in %	5.00	5.00
8. Average	**5.00**	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	40.12	8.45	8.45	91.55	90-100
4.75	261.3	55.01	63.46	36.54	35-51
2.36	52.13	10.97	74.43	25.57	24-39
1.18	40.26	8.48	82.91	17.09	15-30
0.3	27.8	5.85	88.76	11.24	9-19
0.075	29.56	6.22	94.98	5.02	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	30.23	6.05	6.05	93.95	90-100
4.75	258.6	51.72	57.77	42.23	35-51
2.36	84.56	16.91	74.68	25.32	24-39
1.18	44.23	8.85	83.52	16.48	15-30
0.3	30.23	6.05	89.57	10.43	9-19
0.075	26.31	5.26	94.83	5.17	3-8

Note:

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#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
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Job No: CTCE/BBMP/W.No.05/KRIDL/BC/Bitumen/2014-15 01.07.2014

BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE

As per IS2386 and IRC:SP:11-1984

CLIENT	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
AGENCY	**Technical Manager,** KRIDL, Bangalore.
NAME OF THE WORK	Improvements to Roads and Drains from centre excise Layout to Railway Level crossing (telecom Layout railway crossing) in Ward No.05, Chokkanahalli Village limits, BBMP, Bangalore.
REFERENCE	AEE/BTP/360/2014-15 Dated: 23.06.2014
SAMPLE I/D	Roads and Drains at from centre excise Layout in Ward No.05.
DATE OF TESTING	01.07.2014

BITUMEN CONTENT DETERMINATION

Description	Sample 1	Sample 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	474	474
3. Weight of Asphalt and Mineral matter Extracted, g	26	26
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g	-	-
6. Weight of Bitumen Extracted, g. (corrected)	26	26
7. Bitumen content in %	5.20	5.20
8. Average	**5.20**	

GRADATION AFTER EXTRACTION

TABLE - 1

SIEVE SIZE	Percent Passing, %		JOBMIX
mm	Sample 1	Sample 2	Gradation
19	100.00	100.00	100
13.2	81.23	82.26	79-100
9.5	76.25	77.42	70-88
4.75	54.25	59.56	53-71
2.36	45.15	45.58	42-58
1.18	38.25	37.48	34-48
0.6	30.12	29.55	26-38
0.3	19.23	23.58	18-28
0.15	15.23	15.54	12-20
0.075	5.36	6.23	4-10

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ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ
ಬಿ.ಬಿ.ಎಂ.ಪಿ. ಬ್ಯಾಟರಾಯನಪುರ ಉಪ ವಿಭಾಗ